88. (Twice amended) A method of restoring motor function in a mammal [afflicted] with [or at risk of] amyotrophic lateral sclerosis, comprising

administering to the mammal a morphogen comprising a dimeric protein

(1) having an amino acid sequence selected from the group consisting of:

(a) a sequence having at least 70% amino acid homology with the C-terminal seven-cysteine [skeleton] domain of human OP-1, residues 38-139 of SEQ ID NO:5;

(b) a sequence having greater than 60% amino acid sequence identity with said C-terminal seven-cysteine [skeleton] domain of human OP-1;

(c) a sequence defined by Generic Sequence 6, SEQ ID NO:31; [and]

(d) a sequence defined by OPX, SEQ ID NO:29; and

(e) a sequence encoded by a nucleic acid capable of hybridizing with a nucleic acid complementary to a nucleic acid encoding the C-terminal seven-cysteine domain of human OP-1, amino acids 38-139 of SEQ ID NO:5,

(2) wherein said morphogen stimulates production of an N-CAM or L1 isoform by an NG108-15 cell *in vitro*;

wherein the administration of morphogen restores motor function in the mammal.

90. (Twice amended) A method of restoring motor function in a mammal [afflicted] with a spinal cord injury, comprising

administering to the mammal a morphogen comprising a dimeric protein

(1) having an amino acid sequence selected from the group consisting of :

(a) a sequence having at least 70% amino acid homology with the C-terminal seven-cysteine [skeleton] domain of human OP-1, residues 38-139 of SEQ ID NO:5;

(b) a sequence having greater than 60% amino acid sequence identity with said C-terminal seven-cysteine [skeleton] domain of human OP-1;

(c) a sequence defined by Generic Sequence 6, SEQ ID NO:31; and

(d) a sequence defined by OPX, SEQ ID NO:29; and

(e) a sequence encoded by a nucleic acid capable of hybridizing with a nucleic acid complementary to a nucleic acid encoding the C-terminal seven-cysteine domain of human OP-1, amino acids 38-139 of SEQ ID NO:5,

(2) wherein said morphogen stimulates production of an N-CAM or L1 isoform by an NG108-15 cell *in vitro*;

wherein the administration of morphogen restores motor function in the mammal.

97. (Amended) A method of restoring motor function in a mammal [afflicted] with amyotrophic lateral sclerosis, comprising

administering to the mammal a morphogen selected from the group consisting of human OP-1, mouse OP-1, human OP-2, mouse OP-2, 60A, GDF-1, BMP2A, BMP2B, DPP, Vgl, Vgr-1, BMP3, BMP5, and BMP6, [wherein said morphogen stimulates production of an N-CAM or L1 isoform by an NG108-15 cell *in vitro*] wherein the administration of morphogen restores motor function in the mammal.

99. (Amended) A method of restoring motor function in a mammal [afflicted] with a spinal cord injury, comprising

administering to the mammal a morphogen selected from the group consisting of human OP-1, mouse OP-1, human OP-2, mouse OP-2, 60A, GDF-1, BMP2A, BMP2B, DPP, Vgl, Vgr-1, BMP3, BMP5, and BMP6, [wherein said morphogen stimulates production of an N-CAM or L1 isoform by an NG108-15 cell *in vitro*] wherein the administration of morphogen restores motor function in the mammal.

105. (New) The method of claim 90 or 99, wherein said spinal cord injury results from a tumor.